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(71) Applicant (for all designated States except US): NORAK BIOSCIENCES, INC. [US/US]; 7030 Kit Creek Road, Morrisville, NC 27560 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): COWAN, Conrad, L. [US/US]; 125 Starwood Lane, Holly Springs, NC 27540 (US).

(74) Agent: ELLIOTT, Joshua, T.; Hutchison & Mason PLLC, P.O. Box 31686, Raleigh, NC 27612 (US).

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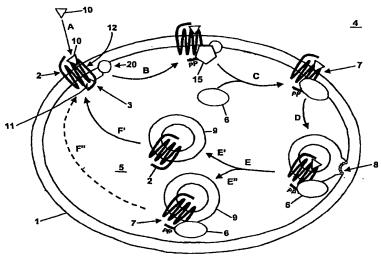
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(54) Title: METHODS OF SCREENING COMPOSITIONS FOR G PROTEIN-COUPLED RECEPTOR AGONIST ACTIVITY



(57) Abstract: Methods of screening compositions for G protein-coupled receptor ("GPCR") agonist activity against two or more GPCRs in a multiplex receptor assay format are disclosed. One or more cells expressing at least two different GPCRs are exposed to a test composition and it is determined whether or not the composition gives an indication of GPCR agonist activity with respect to any of the at least two different GPCRs. Each of the one or more cells also includes one or more conjugates comprising a marker molecule and a protein associated with the GPCR desensitization pathway of one or more of the GPCRs; that are being used to screen the composition for GPCR agonist activity. The conjugate or conjugates are used to indicate, through the use of the marker molecule, GPCR agonist activity of the test composition with respect to each of the GPCRs that are being used to screen the test composition.